



Henry J. Morgan.

from the Abbé Brunet

(From the Canadian Naturalist.)

### MICHAUX AND HIS JOURNEY IN CANADA.

By the ABBÉ OVIDE BRUNET, Professor of Botany at the Laval University  
Quebec.\*

It is well known to botanists, that the *Flora Boreali-Americana* of Michaux often fails to indicate the precise localities of the plants there first described, and that, in consequence, many of these plants are either still unknown to collectors, or excessively rare. In the hope of being able to determine the localities of those plants which this author has noticed as occurring in Canada, I attempted several years since to trace the steps in his journey to the Saguenay, and to Hudson's Bay. At that time however, the only materials at my disposal were the *Flora*, and some scattered notes in the works of his son. I had not then seen his Herbarium, which is rich in notes of localities; and the manuscript journal of his journey, in the library of the American Philosophical Society in Philadelphia, was unknown to me. Since that time however, I have been able to consult the original collections of Michaux, which are in part at the Jardin des Plantes of Paris, and in part in the museum of Mr. Benjamin Delessert of that city. The American Philosophical Society has moreover permitted me to copy the manuscript journal, for which favor I take this occasion of expressing my thanks.

\* TRANSLATOR'S NOTE.—This interesting paper was printed a few months since, in French, by Mr. Brunet, for private distribution only. I have accordingly translated it for publication in the *Canadian Naturalist*, suppressing some unessential portions, with the approbation of the author; who has added to it a map of the region from Lake St. John to Hudson's Bay. A MS. map by the Jesuit Laure, who was a missionary in Canada during the early part of the last century, is the chief authority for the region beyond Lake St. John, though other old French maps were consulted. The map of Laure is in the library of the Canadian Parliament.—T. S. Hunt, *Geol. Survey*

In the following pages, which I have prepared with the aid of the materials thus placed at my disposal, I shall give a list of the most interesting plants found by our botanist in the various localities visited during his Canadian journey; while for the more common species, I shall only notice the most northern points at which they were observed. There will be found in these pages, notices of more than one hundred and sixty plants observed by Michaux in localities not mentioned in his *Flora*. These indications, it is to be hoped, will not be devoid of interest to collectors, and to students of geographical botany; while in addition will be found some interesting details from the journal of Michaux on the characters of a portion of that almost unknown region which forms the water-shed between the St. Lawrence and Hudson's Bay.

André Michaux, the early years of whose life were devoted to agriculture, soon conceived a plan for visiting foreign countries with the object of studying their plants, and, if possible, introducing them into France. As a preparation for this, he came to Paris in 1779, and studied botany for two years under Bernard de Jussieu. After having in the pursuance of his plan visited England, and crossed the Pyrenees into Spain, he visited Persia, from whence he brought great collections of plants and seeds. The French government, desirous of introducing into France some of the trees of North America, then decided on sending Michaux to this continent; where his orders were to travel through the United States, and collect both trees and seeds, which were to be sent to France. In pursuance of this mission, he sailed on the 25th of August 1785, and reached New York the 1st of October, accompanied by a gardener. Although his journey had for its chief object the introduction of forest-trees, Michaux had received orders to send also such shrubs and plants as might serve to ornament the king's gardens.

He at first made New York his head-quarters, from which he visited New Jersey, Pennsylvania, and Maryland, and he established a nursery in New Jersey, with a view of raising young trees which should be of better growth than those found in the forests. In the year following, Michaux sent to Paris twelve boxes of seeds, and several thousand young trees. After a time he removed to Charleston, South Carolina, and there established a second nursery, which soon obtained great dimensions from the immense collections of trees and shrubs, the fruit of more than sixty journeys in various parts of the interior. The manuscript

notes of Michaux, however, give us no details of these excursions up to the month of April 1787, when he made his first journey to the Alleghanies, going up the Savannah River to its head, and thence gaining the heights of the mountain region. Having made friends with some of the Indians, he then ascended with them one of the tributaries of the Savannah, and reached a branch of the Tennessee on the other side of the mountains. This was the limit of his voyage, and he then returned to Charleston on the first of July, after a voyage of 300 leagues in South Carolina and Georgia. His manuscript notes of this journey contain many observations on the plants met with, and precise indications of their localities. In 1788 and 1789 he visited, successively, Florida, the Lucayan islands, and Virginia, passing through the mountain region of North Carolina. He returned to Charleston from this last excursion in September 1789, but revisited the region in the course of the following winter, accompanied by his son, reaching Charleston again in the spring of 1790, where he remained until April 1791. His notes during this year are wanting.

Michaux had now spent six years in America, his pecuniary resources were nearly exhausted, and he feared to be obliged to return to France without having completed his plans on this continent. He had long desired to add to his studies upon the American Flora, some researches on the geographical distribution of the forest trees, and to determine the native region of each, which he regarded as that in which the plant attains its greatest size and strength. The tulip-tree (*Liriodendron tulipifera*), for example, appears in Western Canada with a maximum height of sixty feet, and a diameter of three feet; while westward, and especially in Kentucky, where it forms by itself vast forests, it reaches a height of one hundred and forty feet, and a diameter of seven or eight feet. To the northward, on the contrary, it becomes rarer and smaller, and Michaux was hence led to regard this tree as a native of Kentucky. In accordance with these views, he resolved to study the topography of the North American trees. He had already extended his travels southward to Florida, but another journey, longer and more difficult, but still more important to his investigations, yet remained to be accomplished,—a visit to Canada and northward as far as Hudson's Bay. This project he attempted in 1792. Leaving Charleston in April, he proceeded northward by land, and, as we learn from his manuscript notes,

went first directly to New York, thence to New Haven, and finally to Albany, where he arrived on the 14th June. On the 18th we find him at Saratoga, and on the 20th he embarked on Lake Champlain at Whitehall. The remainder of this month was employed in examining the vegetation on the shores of the lake, which he crossed several times. In his *Flora*, mention is made of a great number of plants which he found in this region.\* On the 30th of June, Michaux reached Montreal, where he spent ten days in collecting the plants of the environs. On the 1st of July, he tells us he botanized on the mountain. "On the 3rd, in the country and the low meadows," and "on Sunday the 8th, in the wood of Lachine, for a league along the river-side." In these excursions he collected the following plants, which are marked in his herbarium as having been collected about Montreal:

*Scirpus spathaceus*, Michx.; *Elodea Canadensis*, Michx.; *Poa compressa*, Linn.; *Scutellaria parvula*, Michx.; *Oxalis corniculata*, Linn.; *Hypericum macrocarpum*, Michx.; *Acalypha Virginica*, Linn.; *Zanthoxylum fraxineum*, Willd.

On the 11th June Michaux left for Quebec; but adverse winds obliged him to put in at Sorel and at Batiscan, where he made collections. In the latter locality he found *Scheuchzeria palustris*, Linn.; *Triglochin maritimum*, Linn.; *Drosera longifolia*, Linn.

He reached Quebec on the 16th July, and remained there a fortnight, in which time he made several excursions in the environs, visiting the Falls of Montmorency, Lorette (probably La Jeune Lorette), and botanized in the forest on the right bank of the river St. Charles. As the season was advancing, he now made arrangements for his journey to Hudson's Bay. Engaging as an interpreter a young half-breed, who had been three years with the Indians, he started for the Saguenay. The following extracts from his notes will show his route:

---

\* It would be superfluous to furnish lists of plants whose names and localities are found in the *Flora* of Michaux. When therefore in this narrative I give a list of plants found by our botanist in any locality, it will be understood to include only those which have not been mentioned in his *Flora* as there occurring; but which are given in his Herbarium, or in his manuscript notes as having been found in that locality. For the convenience of reference, however, I give in the following manner, the pages where the plants not here named will be found mentioned:

*Flora Boreali-Americana*, in Canada, ad ripas lacus Champlain, vol. i, fol. 47, 75, 136, 153, 304; vol. ii, fol. 28, 198, 227, 245.



"Left Quebec July 31, sailing by Cape Tourmente and Cape Brulé, which are distant twelve and fourteen leagues from Quebec. Saw upon the mountains *Juniperus communis*, *Thuja*, *Abies balsamea*, *A. alba*, *Epigæa repens*, *Linnæa borealis*, etc., etc. .... That night lay off Bay St. Paul. .... August 1st. The wind changed and rain fell; botanized on the mountains. .... August 2nd. Arrived at Malbaie, and left there on the 4th, reaching the mouth of the Saguenay, where I passed the night. On the morning of Sunday the 5th reached Tadoussac, forty-six leagues from Quebec."

The plants collected by Michaux at Malbaie were as follows:

*Hippuris vulgaris*, Linn.; *Salicornia herbacea*, Linn.; *Pulmonaria parviflora*, Michx.; *Ligusticum Scoticum*, Linn.; *Salsola salsa*? Michx.; *Polygonum cilinode*, Michx.; *Potentilla hirsuta*, Michx.; *Astragalus secundus*, Michx.;\* *Medicago lupulina*, Linn.; *Pteris gracilis*, Michx.

A little lower down on the shores of the St. Lawrence he gathered *Salicornia herbacea*, Linn.; *Arundo arenaria*, Linn.; *Glaux maritima*, Linn.; *Salsola salsa*? Michx.; *Atriplex patula*, Linn.; *Rumex verticillatus*, Linn.; *Arenaria rubra*, Linn., (= *Spergularia rubra*, Pers.); *Potentilla hirsuta*, Michx.; *Empetrum nigrum*, Linn.

The picturesque little village of Tadoussac is built upon a point of rock at the entrance to the Saguenay, and was a post of the Hudson's Bay Company. Here Michaux bought two bark-canoes, and engaged three Indians; here also, as we learn from his Flora and his Herbarium, he collected the following plants: *Ligusticum Scoticum*, Linn.; *L. actwifolium*, Michx.; *Gentiana acuta*, Michx.; *Epilobium tetragonum*, Linn.; *Vaccinium Vitis-Idæa*, Linn.; *Potentilla hirsuta*, Michx.; *Ilex Canadensis*, Michx. †

He was soon however on his way up the Saguenay, which for a distance of twenty-seven miles flows between immense walls of gneiss, often extremely bold and picturesque. The banks are almost destitute of vegetation, except in the fissures of the rocks, where a few stunted pines and spruces, wild gooseberries and blueberries laden with fruit, and a juniper (*Juniperus sabina*), form

\* See note† on page 331.

† Flora Boreali-Americana, ad ripas fluminis *S. Laurentii*, juxta Tadoussac, vol. i, fol. 166, 177; in fluminis *S. Laurentii* aquis affluente mare subsalsis, vol. i, fol. 1, 67, 95, 102, 132.

a green tapestry hanging on the embankments, which rise sometimes a height of 1100 feet.\*

As we approach Ha! ha! Bay the shores become lower, and the great pine forests which form the wealth of this region are seen. At Chicoutimi, where the river ceases to be navigable for large vessels, it spreads into a wide basin which receives a cascade of forty feet in height. Michaux reached this spot on the 11th of August.

Chicoutimi, which signifies *deep water*, was then a little village at the junction of the river of this name with the Saguenay. Upon a point which projects into the basin was a small chapel about twenty-five feet long, built by the Jesuits, and having within a single altar and a few pictures, while outside was seen the tomb of Père Coquart, the last of the Jesuits, who, with the Père Labrosse, had first preached the Gospel to the natives. Michaux, in the manuscript notes which he left to his son, thus speaks of this chapel: "On my way to Hudson's Bay I reached in the month of August the Lake Chicoutimi, near the 48th degree of latitude, and there found the church erected in 1728 (as indicated by the date placed over the principal entrance) by the Jesuit fathers for the natives of the vicinity. This building, made of squared timbers of white cedar (*Thuja occidentalis*) placed upon each other, was in good preservation; and although these beams had never been covered either within or without, the wood at the depth of half a line was not the least altered after a lapse of more than sixty years."† This little chapel was still standing in 1857.

The route to Lake St. John was then much more difficult than that which is now followed. Michaux went up the river Chicoutimi in a canoe and then passed through Lake Kinogomi, from which, by a portage of half a mile, he reached Lake Kinogomichiche; this discharges itself by a slow and tortuous stream into Belle River, which falls into Lake St. John, which our traveller reached after a journey of six days from Chicoutimi, gathering the following plants in his way:

*Scirpus spathaceus*, Michx.; *Sweetia corniculata*, Linn.; *Prinos verticillatus*, Linn.; *Gentiana pneumonanthe*, Linn.; *Drosera rotundifolia*, Linn.; *Triglochin palustre*, Linn.; *Juncus fluitans*, Michx.; *Mitella diphylla*, Linn.; *Sparganium natans*, Michx.;

\* Flora Boreali-Americana, in saxosis ad amnem Saguenay, vol. i, fol. 3. vol. ii. fol. 246.

† Michaux fils, Arbres Forestiers, vol. iii, p. 34.

*Nymphaea lutea*,  $\beta$ . *Kalmiana*, Linn.; *Spergulastrum lanceolatum*, Michx., (= *Stellaria borealis*, Bigelow); *Alnus crispa*, Michx.; *A. glauca*, Michx.; *Lobelia Dortmanna*, Linn.

Lake St. John lies between latitude  $48^{\circ} 23'$  and  $48^{\circ} 42'$ , and between longitude  $71^{\circ} 29'$  and  $72^{\circ} 9'$ , its greatest length being sixteen leagues; it is more than thirty leagues to the north of Quebec. Michaux went entirely around it, and collected a great number of plants;\* but in pursuance of his plan of studying the trees, he also penetrated into the surrounding forests, which abound in valuable timber-trees, details with regard to the nature and distribution of which, will be given further on.

It was on the 16th August that our botanist reached this lake, but, delayed by an adverse wind, he spent the next day at the mouth of Belle River, where he found *Lycopus Virginicus*, Linn.; *Circaea Canadensis*, Linn.; *Bromus Canadensis*, Michx.; *Arundo arenaria*, Linn.; *Galium Claytonii*, Michx.; *G. asprellum*, Michx.; *Cornus alternifolia*, Linn.; *Polygonum amphibium*, Linn.; *Cerasus pumila*, Michx.; *Lathyrus palustris*, Linn.; *Astragalus secundus*,† Michx.; *Hedysarum alpinum*, Michx.; *Aster amygdalinus*, Michx.; *A. cordifolius*, Linn.; *Solidago flexicaulis*, Linn.; *S. aspera*, Ait.; *Senecio pauperculus*, Michx.; *Artemisia Canadensis*, Michx.; *Lobelia Kalmii*, Linn.; *Eriocaulon pellucidum*, Michx.; *Calla palustris*, Linn.; *Salix cordata*, Michx.; *Ilex Canadensis*, Michx.; *Vitis riparia*, Michx.

Of the *Vitis* just named, Michaux has in his Herbarium the following notes: "Called beach-vine (*vigne des baitures*) by the French voyageurs on the Ohio and Mississippi, because it grows upon the rocks and sands which are exposed to the annual floods. .... This species is never found to the east of the Alleghany Mountains."

\* Flora Boreali-Americana, in lacu vel juxta lacum *S. Joannis*, vol. i, fol. 240, vol. ii, fol. 205, 220, 225.

† Prof. Asa Gray had for some time supposed the *Astragalus secundus* of Michaux to be the *Phaca astragalina*, D. C., (*Astragalus alpinus*, Linn.) when in 1861, I re-discovered the plant at Lake St. John, where Michaux had first found it, and sent specimens of it to Prof. Gray, which fully confirmed his opinion that it is but another form of *A. alpinus*, Linn. But whence this difference of form? Last year, at the Island of Orleans, where this species is abundant, I found the two varieties in the same locality; and I was able to observe that when it grows on exposed rocks the plant has the ordinary form of *Phaca astragalina*; while on the contrary, when sheltered by a growth of taller plants, it assumes the slender and elongated form of the plant of Michaux.



Among the rivers which fall into Lake St. John is the Mistassini, called also R. des Sables, from the great quantity of sand which it brings down. By this river, which has a length of about 150 miles, the Indians known by the name of Mistassins, and living around the great lake of that name, were accustomed to descend at Pointe Bleue, the most northern trading-post in this region, where they sold their furs. They still come down every year in the month of June for the purpose of trade, and also to meet the missionary who pays them an annual visit. It was by this river that Michaux proposed to pass to Hudson's Bay. Leaving the post at Pointe Bleue on the 21st August, he reached in a few hours the river Mistassini. The waters were shallow, and for five or six leagues flowed through banks of moving sands, which were sometimes more than half a league long. The lands on either side were low and fertile, no mountains were visible, and the trees were chiefly elms, ashes, and pines, of a good growth.\* At the end of about eighteen leagues Michaux arrived at a beautiful waterfall about eighty feet in height, and on the evening of the 22nd August encamped on the borders of the basin below.

This point which was known as Larges Rapides, Michaux observed as the northern limit of *Potentilla tridentata*, while *Gaultheria procumbens*† disappeared ten leagues above Lake St. John, although Hooker, in his *Flora Boreali-Americana*, has indicated Quebec as its northern limit.

The 23rd being a day of rain, Michaux remained in camp; but the three following days he continued the ascent of the river, which became narrower, and so rapid that the canoes could only be propelled by means of poles. At length he reached the portage called *Monte-à-peine*, where he was obliged to make a difficult and even dangerous ascent of a hill eight or nine hundred feet in height. From the summit he looked down into an immense valley, traversed by green hills which resembled great waves in an ocean of verdure. A single small river alone broke the monotony of this landscape; to it the travellers directed their steps, and soon reached a stream which was only about eighteen feet wide. During

\* Flora, in Canada ad amnem *Mistassini*, vol. i, fol. 34, 61, 110.

† Some botanists have ventured to change the name of this plant to *Gautiera*; but the true orthography of the name of its discoverer is *Gaultheria*, as appears from the registers of Notre Dame de Quebec (Register of Aug. 26, 1751). It would besides be undesirable to change a name consecrated like this by long use.

*Gaultheria*

the portage the following plants were met with: *Vaccinium cespitosum*, Michx.; *Epigaea repens*, Linn.; *Arbutus Uva-ursi*, Linn.; *Lycopodium inundatum*, Linn.; *L. Selaginoides*, Linn.; *Botrypus lunarioides*, Michx.

The little river on which they now embarked was generally deep enough for their canoes, but the navigation was often interrupted by the dams constructed by the beavers, whose cabins were seen on the shores. This stream led them to Swan Lake (Lac des Cygnes), which they reached in the afternoon of the 29th August. This picturesque little lake, which is about forty-five leagues from Lake St. John, is very irregular in form, in some parts having a breadth of two leagues, and at others being very narrow. The shores are generally low, with occasional hills covered by stunted trees. Around the shores of this lake Michaux found the following plants: *Avena striata*, Michx.; *Arundo Canadensis*, Michx.; *Xylosteum villosum*, Michx.; *Juncus melanocarpus*, Michx.; *Vaccinium Vitis-Idæa*, Linn.; *Epigaea repens*, Linn.; *Epilobium oliganthum*, Michx.; *Potentilla fruticosa*, Linn.; *Aster uniflorus*, Michx.; *Carex lenticularis*, Michx.; *Abies balsamifera*, Michx.; *A. denticulata*, Michx.; *Betula glandulosa*, Michx.

He remarks that *Avena striata* is the only gramineous plant observed by him in this vicinity, and also that Swan Lake appears to be the most northern limit of *Vaccinium Vitis-Idæa*.

Lake Mistassini is about 100 leagues from Lake St. John, and Michaux had already traversed about half the distance, but the most difficult part remained. He had to cross a dismal wilderness, where the vegetation consists only of a small number of stunted and depauperated species. "The trees which predominate in the forests, a few degrees to the southward, have here almost entirely disappeared, from the severity of the winters and the sterility of the soil. All this region is traversed by thousands of lakes, and covered with enormous rocks piled upon one another, and generally covered with huge black lichens, which add to the gloomy aspect of this desert and almost uninhabitable country. Between these rocks are seen here and there some specimens of a stunted pine (*Pinus rupestris*), which at the height of three feet is seen bearing fruit, and having all the marks of decrepid old age. One hundred and fifty miles to the southward this pine attains a height of eight or ten feet, and presents a much more vigorous growth."\*

---

\* Michaux fils, Arbres Forestiers, vol. i, page 49.

Of this region, between Swan Lake and Lake Mistassini, Michaux remarks in his journal, that it evidently occupies the height of land, since the waters of the latter lake fall northward into Hudson's Bay, while those of Swan Lake through the river Mistassini reach Lake St. John and the St. Lawrence. We cannot give a better notion of the climate and vegetation of this elevated and semi-arctic region, than by the following extracts from the manuscript journal of Michaux:

"August 30th. We have passed through three lakes, which lie among low hills, and are connected by short streams. The whole of this region is cut up into mountains and hills; the low places between which are filled with water, forming innumerable lakes, which for the most part have no names among the Indians who hunt in this country. Wide intervals are often covered with *Sphagnum*, in which the traveller sinks to his knees, and which even in the dry weather is always saturated with water. In the course of the day we have made three portages, and have travelled three or four leagues only, on account of the difficulty of crossing these marshes.

"These marshes abound in *Kalmia glauca*, *Andromeda polyfolia*, *Sarracenia purpurea*, and *Vaccinium Oxycoccus*. In the drier parts are *Andromeda calyculata*, *Ledum palustre*, *Kalmia angustifolia*, *Epigaea repens*, and *Pinus rubra*. *Abies balsamifera* may be said to cease at Swan Lake: I saw only three specimens of it to day in the form of little shrubs. All the plants here seem like decrepid pigmies on account of the sterility and the severity of the cold.

"August 31st. We paddled for an hour; and then came to a portage. The cold was excessive, the sky cloudy for the last two days, and the rain like melted snow. When we stopped for breakfast, the cold took away our appetites, and the Indians, who were drenched with water, trembled with cold.

"September 1st. The rain prevented our travelling, and one of our Indians was sick. In the afternoon the weather was clearer, and we went on notwithstanding the rain. All night we had rain with thunder and lightning. We made six leagues, passing through a lake and along streams scarcely wider than a canoe.

"September 2nd. Sunday. The weather was very thick in the morning, and a half-melted snow fell; the cold became less severe, but we had a portage of three quarters of a league across a marsh. Despite showers of hail, which lasted all day, we kept on, for the

Indians, like myself, were most anxious to reach Lake Mistassini before the snow and cold should augment. We crossed three lakes, and travelled about ten leagues.

"September 3rd. Ice formed about a line in thickness. After midnight a white frost was seen on the vegetation around our camp, and there was promise of a fine day; but about seven in the morning the air became thick, and we had alternations of snow, rain, hail, and sunshine. \* \* \* At eleven o'clock we reached a great river flowing northward, and with a favoring current we made eighteen or twenty leagues to-day. The soil appeared to grow better.

"September 4th. We were obliged to make three portages, on account of rocky rapids, and at a quarter past ten reached Lake Mistassini."

The following plants, in addition to these already mentioned, were met with in crossing the height of land: *Scirpus eriophorum*, Michx.; *Cinna arundinacea*, Linn.; *Avena striata*, Michx.; *Symphoricarpos racemosus*, Michx.; *Gentiana pneumonanthe*, Linn.; *Juncus melanocarpus*, Michx.; *Triglochin maritimum*, Linn.; *Alisma plantago*, Linn.; *Vaccinium oxycoccus*, Michx.; *V. cespitosum*, Michx.; *V. myrtilloides*, Michx. (*V. Pennsylvanicum*, Lam.); *Mentha borealis*, Michx.; *Pinus inops*? Ait.; *Lycopodium Selaginoides*, Linn.

Of the great Mistassin Lake but little is known; the sketch of it given in the accompanying map represents its size and shape as far as can be gathered from the missionaries and Indian traders. Rupert's River, by which it empties into James's Bay, is described as being from fifty to sixty leagues in length, and larger than the Saguenay. Its name, and that of the natives of its shores, is derived from the Indian word *mistassini*, by which they designate a huge rock which hangs over the lake near its outlet, and is regarded as the abode of a Manitou or Great Spirit, who is an object of religious worship. When crossing the lake they are said to keep their eyes turned away from this rock lest he in his ire should excite a tempest. Near the lake, on a small river which flows into it, is said to be a rude cavern in marble, which the Indians call the house of the Great Spirit. The notes of Michaux add but little to our knowledge of this lake. He tells us, however, that the shores are low, and the hills remote, and adds that "the waters of the lake are discharged by rivers to the north and northwest, which fall into Hudson's Bay, the journey to which, from the

lake requires, according to the Indians, four days, although, on account of the rapids, it requires ten days to return."

Michaux reached Lake Mistassini on the 4th of September, and, after paddling along it for ten or twelve leagues, encamped on a long peninsula on the west side of the lake. The next morning he began to collect plants, of which he gives the following names, exclusive of those mentioned in his *Flora* as occurring in this region:\*

*Lycopus Virginicus*, Linn.; *Scirpus sylvaticus*, Linn.; *S. eriophorum*, Michx.; *Phalaris arundinacea*, Linn.; *Cornus Canadensis*, Linn.; *C. stolonifera*, Michx.; *Potamogeton perfoliatum*, Linn.; *Linnæa borealis*, Gronov.; *Ulmus fulva*, Michx.; *Streptopus distortus*, Michx.; *Convallaria stellata*, Linn.; *Triglochin maritimum*, Linn.; *Epilobium angustifolium*, Linn.; *Vaccinium oxycoccus*, Linn.; *V. hispidulum*, Linn.; *V. uliginosum*, Linn.; *Pyrola secunda*, Linn.; *Epigæa repens*, Linn.; *Spergularium lanceolatum*, Michx.; *Cerasus borealis*, Michx.; *Sorbus aucuparia*, Linn.; (*Pyrus Americana*, D. C.); *Geum rivale*, Linn.; *Potentilla fruticosa*, Linn.; *Rubus occidentalis*, Linn.; *R. arcticus*, Linn.; *Prunella vulgaris*, Linn.; *Rhinanthus Crista-galli*, Linn.; *Sisyrinchium Bermudiana*, Linn.; *Geranium Carolinianum*, Linn.; *Bartonia pallida*, Linn.; *Hedysarum alpinum*, Michx.; *Hieracium scabrum*, Michx.; *H. Canadense*, Michx.; *Aster macrophyllus*, Linn.; *Solidago aspera*, Ait.; *Senecio aureus*, Linn.; *Lobelia Dortmanna*,† Linn.; *Carex flava*, Linn.; *Betula papyrifera*, Michx.; *Sparganium angustifolium*, Michx.; *Abies alba*, Michx.; *A. balsamifera*, Michx.; *A. denticulata*, Michx.; *Pinus inops*?‡ Ait.; *Salix incana*, Michx.; *Acer montanum*, Ait.; *Osmunda regalis*, Linn.

Having made his collections, and reached the other side of the lake, Michaux proceeded on his journey; choosing for this purpose, among the discharges of the lake, a large and fine river falling into Hudson's Bay, and known as the Rivière des Goëlands (Gull

\* *Flora Boreali-Americana*, ad sinum *Hudsonis* et juxta lacus, *Mistassini*, vol. i, fol. 5, 11, 14, 61, 64, 111, 124, 191, 223; vol. ii, fol. 2, 115, 121, 123, 153, 154, 171, 172, 173, 175, 180, 283.

† The *Lobelia Dortmanna* is a rare species in Canada: I have as yet found it in but two localities, Lake Kenogami and Lake St. Joachim.

‡ The *Pinus inops* here mentioned is the *P. Banksiana*, Lamb., *P. rupestris*, Michx. fils., already mentioned on page 333. It may be here remarked, however, that it attains in some localities a height of thirty feet.



River), which is very probably that designated in the maps as Rupert's River. He followed this for some distance, and camped on the night of September 5th, near the Atchoukue or Seal River. The next day a cold fog was succeeded by rain and snow, and compelled him to stop. The Indians, fearing the rigors of the season, refused to go further, assuring him that if the snow continued it would be impossible for them to return. It was therefore decided that they should immediately retrace their way to Lake Mistassini, where they arrived that night. Along the banks of the Gull River the following plants were collected:—*Xylosteum villosum*, Michx.; *Primula Mistassinica*, Michx.; *Ledum latifolium*, Ait.; *Rubus Chamamorus*, Linn.; *Aster uniflorus*, Michx.; *Carex Richardi*, Thuill.; *Betula nana*, Linn.; *Myriophyllum spicatum*, Linn.; *Salix incana*, Michx.; *Myrica Gale*, Linn.; *Lycopodium annotinum*, Linn.

Michaux left Lake Mistassini on the 7th of September. His journey back, although difficult, was rapid; and from the height of land the descending currents of the rivers, now swollen, enabled the travellers to pass down in their canoes over most of the rapids where they had made portages in ascending. On the 9th of September he passed Swan Lake and camped at Monte-à-Peine, and on the 10th reached the river Mistassini, and camped at night "four leagues below the Larges Rapides, near the first Weymouth pines (*Pinus strobus*) which we met on our way downwards." On the 12th, Michaux reached Lake St. John, and two days later left for Quebec; from which he returned, by way of Montreal and Lake Champlain, to Philadelphia, where he arrived on the 8th of December, 1792.







